



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/687,611	10/20/2003	Nobuo Ando	Q78099	2600

23373 7590 06/01/2005
SUGHRUE MION, PLLC
2100 PENNSYLVANIA AVENUE, N.W.
SUITE 800
WASHINGTON, DC 20037

EXAMINER

THORNTON, YVETTE C

ART UNIT PAPER NUMBER

1752

DATE MAILED: 06/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/687,611

Applicant(s)

ANDO ET AL.

Examiner

Yvette C. Thornton

Art Unit

1752

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 March 2005.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 6-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 6-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

This is written in reference to application number 10/687,611 filed on October 20, 2003 and published as US 2004/0191670 A1 on September 30, 2004.

Response to Amendment

1. Claims 4-5 have been cancelled. Claims 1-3 and 6-11 are currently pending.

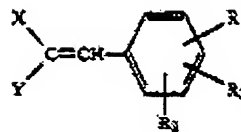
Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

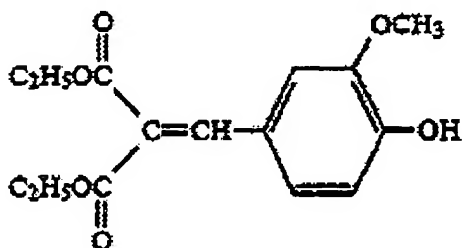
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3, 6-7 and 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fedynyshyn (US 6,468,712 B1) in view of Takeyama et al. (US 5,362,598 A). Fedynyshyn teaches a radiation sensitive resin composition including a photoacid generator and an aliphatic polymer having one or more electron withdrawing groups adjacent to or attached to a carbon atom bearing a hydroxyl group wherein the protecting group is labile in the presence of the generated acid (abstract; cl. 1-33). The taught composition may contain various additives such as a surfactant, a coating property improving agent, a stabilizer, a colorant and an UV absorber to such an extent not to impair the desired properties (c. 21, l. 1-5).

Fedynyshyn is silent on the type of UV absorber, which can be used in the taught invention. Therefore one of ordinary skill in the art would have been motivated to use any UV absorber, which is well known and conventional in the art. Takeyama et al. (US 5,362,598 A) teaches a photoresist



composition comprising a compound of general formula (I), a novolak resin and a naphthoquinone diazide (c. 3, l. 21-25). Takeyama teaches that compounds of formula (I) are suitable the light absorbers in the taught composition. A specific example of said formula (I) is



(15) (c. 5, l. 10-15). It is the examiner's position that

taught compound (15) meets the limitations of instant claim 11. Takeyama serves to establish that light absorbers of general formula (I), specifically compound (15) are well known and conventional in the art. One ordinary skill in the art would have been motivated by what is well-known and conventional, as taught by Takeyama, to use a compound of taught formula (I) as the UV absorber in the composition disclosed by Fedynyshyn.

4. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fedynyshyn (US 6,468,712 B1) in view of Takeyama et al. (US 5,362,598 A) as applied to claims 1-3, 6-7 and 9-11 above, and further in view of Ohsawa et al. (US 2001/0033994 A1). Fedynyshyn in view of Takeyama teaches all the limitations of the instant claims except it fails to teach the use of a quencher as set forth in claim 8. Ohsawa teaches that a basic compound suppresses the rate of diffusion when the acid generated by the photoacid generator diffused within the resist film. The addition of such a compound improves resolution, pattern profile and exposure latitude as well as reduces substrate and environment dependence (p. 0153). One of ordinary skill in the art would have been motivated by the teachings of Ohsawa to incorporate a basic compound into the taught composition of Fedynyshyn in order to improve resolution, pattern profile and exposure latitude.

Response to Arguments

5. Applicant's arguments, filed March 21, 2005, with respect to the rejection(s) of the instant claim(s) have been fully considered and are persuasive. Applicant's amendment to the instant claims serves to overcome the art rejection set forth in the previous office action. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made as set forth above.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Wang et al. (US 5,948,605 A), which teach an ultraviolet ray absorbing polymer latex composition and method thereof.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


8. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yvette C. Thornton whose telephone number is 571-272-1336. The examiner can normally be reached on Monday-Thursday 8-6:30.

Art Unit: 1752

10. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H. Kelly can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

11. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Yvette Clarke Thornton
Primary Examiner
Art Unit 1752

yct
May 27, 2005